

# Complete Summary of Chetco Bar Fire Recovery Efforts

April 16, 2018

This summary paper includes information on a number of Chetco Bar Fire Recovery efforts, including Burned Area Emergency Rehabilitation, Danger Tree Removal, Area Salvage, and Reforestation

## Burned Area Emergency Rehabilitation Efforts

The objective of Burned Area Emergency Response (BAER), is to identify imminent post-wildfire threats to human life and safety, property, and critical natural or cultural resources on National Forest System lands and take immediate actions, as appropriate, to manage unacceptable risks. BAER policy includes: undertaking response actions or emergency stabilization only when the analysis shows that planned actions are likely to reduce risks substantially within the first year following containment of the fire.

### Authorized BAER Treatments:

#### **Noxious Weed EDRR** (Early Detection Rapid Response)

Focus will be: 1) minimizing spread of existing infestations into adjacent highly susceptible areas (moderate-high soil burn severity); 2) assess locations where fire suppression operations had considerable disturbance (control lines, access roads & trails, drop points, etc.). Treatment will begin this spring and be implemented with seasonal workforce.

#### **Cultural-Heritage Site Stabilization**

Sites are being monitored through the wet season to determine if any further action will be needed.

#### **Trail Storm Proofing/Drainage**

Work to begin with low elevation/front country trails and progress to higher elevations. Planning involves expanding/establishing partnerships with recreation clubs, local or state programs, and hiring seasonal workforce to begin spring implementation. Planning is on track for spring implementation.

### Trails include:



for the greatest good

#### **Road Storm Proofing/Drainage**

Pulling ditches & cleaning culvert inlet basins in areas of moderate and high burn severity. Roads completed include 1983, 1909, 1909-050, 1917, 1107, 1107-550, 1107-553, 1107-570, 1376, 1376-310, and 1407. Some roads have been storm proofed multiple times in response to storm events. Work completed to date utilized a combination of in-house and local road maintenance contractor. Work on-going as needed based on storm events.

### **Road Culvert Inlet Protection**

Reconnaissance completed Fall 2017 to determine exact treatment locations on main arterial roads listed in the assessment report including 1376, 1909, 1917, and 1983. Wet winter weather delayed most of this work. Storm proofing work has been effective at keeping culverts clear to date. Debris racks installed at two locations on 1983.

### **Culvert Upsizing & Relief Pipes**

**Relief Pipes:** Relief pipes to reduce risk of crossing failures at high risk locations identified in the BAER assessments were installed in November. This includes locations on FSR 1376, 1909, and 1983 (same locations as culvert upsizing).

**Culvert Upsizing:** Data collection for pipe replacement (upsizing) completed in November, designs are completed. Installation plans in contracting to go to bid soon, with implementation scheduled between June 1 and October 31, 2018. This includes an Aquatic Organism Passage design crossing on FSR 1376 on Second Creek, as well as two culverts on FSR 1909 and one culvert on FSR 1983.

### **Hazard Tree Mitigation at Road Treatment Locations**

Will occur concurrently with road culvert inlet protection, culvert upsizing & relief pipes, and gate installation.

### **Hazard Tree Mitigations NFS Road 1376**

Imminent hazard trees felled up to 30' buffer each side for 2.75 miles adjacent to NFS road 1376 in early November 2017. BAER funded work completed.

### **Hazard Tree Mitigation at Recreation Sites**

Work completed at Nook Bar, Redwood Bar, and Lower S.F. Campground in beginning of November 2017. Little Redwood Campground hazard trees partially removed. Trailheads listed in BAER report still planned.

### **Road Storm Patrol**

Incorporating components from Forest FERM (Flood Emergency Road Maintenance Plan). Storm patrols will commence as needed, utilizing district personnel. On-going.

### **Road Closure Gates**

Only one BAER-funded temporary closure gate has been installed (January 2018), located on FRS 1983110 (Mt. Emily communication site). No other BAER gates are anticipated necessary for human life and safety or property/cultural resource protection.

### **Repair Burnout Cavities under National Forest System (NFS) Roads**

Shoulder burn-out repair complete on NFS roads 1909-050 and 1376 in November 2017. Smaller burn-outs on 1376-080 completed November 2017. Burnout repair on 1983, 1205, and 1107 completed January 2018.

**Hazard Road signs:** "Entering Burned Area..." signs for road locations (8) as well as replacement route marker (carsonite signs) were installed over the winter.

**Hazard Recreation Signs:** Chetco River corridor recreation site signs were installed in November. Installation at other sites to be completed at priority locations as areas are opened. Sign install at backcountry areas will precede lifting of closure orders.

#### **Bridge Approach Guardrail Repair**

Replacement of fire damaged guardrail system at the S.F. Bridge approaches was completed December 21, 2017.

#### **Dispersed Recreation Area Barriers**

No gates ordered, as the proposed treatment expected was not needed.

#### **Vault Pumping and Hazard Cleanup**

Pipes (vault stacks) have been capped (Fall 2017) to prevent flooding (along Chetco River, Upper Chetco Trailhead, and Packer's Cabin). Contract to pump vaults with start date of June 1, 2018.

#### **Danger Tree Removal**

Within the Chetco Bar fire perimeter there are **251 miles of Forest Service roads** under the current **Motor Vehicle Use Map**. Work has been completed to remove imminent danger trees using emergency authorizations to reopen public access along a high use corridor that accesses private property/residences and popular river access. 115 miles of Forest Service roads remain temporarily closed, due to high severity fire effects and large amounts of danger trees, steep slopes, road conditions and other post-fire hazards identified. These temporarily closed areas will be the focus for the first of several contracts to remove danger trees, and reopen the roads when the risk has been mitigated.

Inclement weather has delayed getting sale areas prepared and contracts awarded. **The first contract area, named "Packer Danger RS Fire Salvage Contract", will be 264 acres and an estimated 9.1 mmbf of timber volume.** This contract is tentatively planned for advertisement in the next couple of weeks depending on weather, depth of snow and if the sale area is accessible for potential bidders to review.

#### **Area Salvage**

The Chetco Bar Fire was the largest fire on the Rogue River-Siskiyou National Forest in 2017, burning 191,197 acres of which 170,321 acres were on National Forest System lands. Approximately 85% of the National Forest System lands that burned within the Chetco Bar Fire occurred within lands where management allocations either prohibit post-fire salvage or have requirements for additional analysis to show ecological beneficial effects of treatments to aid in post-fire ecosystem recovery. The remaining 15% (25,386 acres) of the fire on NFS lands occurred on lands designated as "Matrix" within the Northwest Forest Plan.

Approximately 13,000 acres within the Matrix Land Allocation burned with moderate to high severity (>50% basal area loss) burn. An interdisciplinary team analyzed the 13,000 acres for opportunities to harvest dead and/or dying timber in a manner that is consistent with the Siskiyou National Forest Land and Resource Management Plan (LMRP) and the Northwest Forest Plan.

Further evaluation for feasibility of treatments was required, considering riparian reserves, Northern Spotted Owl habitat, Inventoried Roadless Areas, removing units lacking economically viable products and considering logging systems operability and accessibility, etc. These considerations further refine the areas suitable for harvest to 4,090 acres in order to conduct salvage operations in a timely manner.

**A draft Environmental Analysis is scheduled for public release in mid-April with an opportunity of a 30-day comment period. A decision is scheduled for early June of 2018.** The Forest has submitted a request for an Emergency Situation Determination (ESD) to the Chief of the Forest Service in order to meet the desired outcomes within appropriate timelines.

Additional personnel have been temporarily assigned from other Forests to assist with the planning and implementation of both the Area Salvage and the Danger Tree Abatement. We are also hiring several temporary employees to assist through the summer. Due to the influx of additional personnel, the Forest has rented several cabins and homes in the Gold Beach and Brookings area to help with needed housing in an effort to provide some economic opportunities to local residents who were affected by the fire last summer.

### Reforestation

A team is being assembled to evaluate the reforestation/planting opportunities within the entire fire footprint, data estimates that 40% of the Chetco Bar fire burned in moderate to high severity (>50% basal area loss). Many plantations (thinned and un-thinned) incurred stand replacement fire behavior. Natural regeneration is expected in most areas, however, some large areas have no conifer seed source available within dispersal distances. Sprouting hardwoods like tanoak, Pacific madrone, alder, and big leaf maple are already sprouting. Without planting, large areas could potentially convert from mixed hardwood/conifer stands to hardwood (tanoak) stands.

The exotic pathogen, sudden oak death (SOD) is present within the fire area, and is very effective at killing tanoak. This is a serious concern for the future forests of this area, and planting conifers would be important strategy to promote diversity of tree species in the possible scenario that SOD becomes widespread in the Chetco drainage. In order to meet land management and ecological objectives in all land use designations, we are planning to plant Douglas-fir, redwood, and disease resistant stock of western white pine, sugar pine, and Port-Orford-cedar. We are currently working on developing a planting strategy for the fire, which will determine the acres and locations of where different species will be planted.

Unique habitats within the fire experienced both beneficial and adverse impacts. For example, meadow restoration projects where prescribed fire was planned were burned in the fire and met objectives for these areas. In other areas, redwood groves incurred high intensity fire, likely resulting in mortality of some of these large redwood trees. While redwood stands evolved with fire, this mortality may be distressing to some people. Epicormic sprouting is occurring in the crowns of many of the redwoods, and this may present an interesting monitoring/research opportunity for us to monitor survival of redwoods that experienced total crown scorch. Below is a list of post fire restoration projects the forest is considering:

- Native grass seeding of prairies and continued maintenance of the prairie habitat
- Maintain favorable, high light environments for rare/fire adapted species like *Iliamna latibracteata*
- Assessment, restoration, and maintenance of white and black oak savannahs within the fire
- Redwood monitoring and planting of redwoods in appropriate sites
- Sudden oak death monitoring
- Planting disease resistant western white pine, sugar pine and POC in serpentine plant associations
- Trail maintenance to keep Kalmiopsis trails open

## **Good Neighbor Authority**

- The Good Neighbor Authority authorizes States to perform forest, rangeland, and watershed restoration services on National Forest System (NFS) lands.
- Forest Service retains land management responsibilities.
- States are authorized to perform work for the FS, increasing capacity to implement Forest Plans.
- All work performed by the State on NFS land must meet applicable federal laws, regulations, and orders
- State timber sale establishment, award, and administration procedures may be approved for use with State contracts to the extent they satisfy federal laws and regulations.

## **Water Quality and Fisheries**

### *Water quality*

- The City of Brookings is working with a contractor to conduct an assessment of the Chetco Bar Fire and potential effects to the city water intake system. The city is also conducting water quality sampling.
- Forest Service hydrologists and fisheries biologists have conducted field visits to severe burn areas in the Chetco Bar Fire area and conducted visual monitoring for headcutting, turbidity, erosion, and sedimentation in 3 intermittent streams draining into the Chetco River.
- Field observations indicate the only real increase in turbidity to date has been associated with roads- primarily in locations where salvage logging on private lands is occurring with goal of expediting removal prior to deterioration of timber. Mitigation measures required during wet weather operations include installing straw bales and silt fences and rocking haul routes.
- There has been no evidence of wide ranging soil erosion, such as hillslope failures and debris flows; just localized pedestalling which does not typically result in significant turbidity.
- Local Forest Service staff are working closely with the National Weather Service to monitor weather conditions and implement proactive measures to reduce sedimentation in streams and rivers in the fire area as appropriate. Measures may include implementing storm patrols, clearing blocked culverts and cleaning drainage ditches. Staff are also working closely with private timber interests to increase mitigation measures if needed in advance of storm events.
- Outfitter guides working on the Chetco River notify the Gold Beach Special Use Permit manager if there is an increase in sedimentation, turbidity or debris flow. If anything out of the ordinary were reported, the permit manager would notify the district Soil Scientist/Hydrologist: nothing out of the ordinary has been reported to date.
- We've been fortunate to have a mild winter and it is important to note southern Oregon does not typically experience the storms that produce debris flows seen in southern California or in the Southwest.
- Both the large 1987 Silver Fire and 2002 Biscuit Fire had detailed soils and water quality monitoring following the fires:
  1. The Silver Fire was monitored for two years post fire and then again 10 after the fire. The reports concluded that there was no adverse effects to water quality from the fire or salvage logging.
  2. The Biscuit Fire was monitored the winter following the fire. There was a 5 year storm event that occurred. The results of the monitoring concluded there was no adverse effects to water quality from the fire.
- If a changed condition occurs in the Chetco Bar fire area that is different from what has occurred with past fires, then every effort will be made to establish monitoring sites

### *Fisheries*

- Oregon Department of Fish & Wildlife conducted spawning surveys (Coho, Chinook and Steelhead) during the fall of 2017. The survey data is pending.
- Oregon Department of Fish & Wildlife plans to conduct post-fire juvenile steelhead surveys during low flows on the Chetco River this summer. Forest Service personnel will assist if available.
- Forest Service personnel conducted fish surveys on Second Creek in the Wilderness Retreat Area in February 2018 above and below a culvert that will be replaced later this summer with an Aquatic Organism Passage. Survey results will serve as baseline data to determine effectiveness of the passage.

## Reforestation on private lands

There has been a shortage of conifer seedlings typically used for reforestation on private lands for several years. Multiple factors have contributed to the shortage and a good solution has not been identified.

- An increase in large fires and an economic upturn has resulted in greater demand and does not allow the
- Two state-operated nurseries have closed. Since the economic recovery, nurseries are operating at full capacity and turning away orders. Larger nurseries often require a minimum order of 20,000 seedling, making it difficult to secure stock for smaller reforestation projects.
- Federal regulations prohibit the sale of material grown in Forest Service nurseries to non-government entities unless the material has been deemed surplus to the government's needs.
- Opportunities exist to follow a partnership example implemented by the Forest Service nursery in Placerville, CA. The nursery entered into an agreement with a state conservation district to grow seedlings and the conservation district subsequently provided the seedlings to private land owners.

Contact: Diane L. Haase, Western Nursery Specialist & Editor, *Tree Planters' Notes*,  
USDA Forest Service, National Center for Reforestation, Nurseries, and Genetics Resources.  
503-808-2349. [DLHaase@fs.fed.us](mailto:DLHaase@fs.fed.us)

## Reforestation on Forest Service

**There is no shortage of seedlings for Forest Service reforestation projects** currently however, planning ahead is critical to maintaining the supply.

- Each forest in the Pacific Northwest Region develops a seed use plan that defines their best estimate of seed needs for a 10-year period for all conifer species. Now that most Forest Service reforestation efforts are fire-driven versus harvest-driven, it is challenging to know what those needs will be.
- We strive to have enough seed on hand for 10 years of planting. Typically, there is a good cone crop every 7-10 years for most species, but this can vary by species and location. The last good cone crop in the Pacific Northwest was in 2016. Some stock types require one year to grow to a size suitable for planting; others require two or more years.
- Forest Service nurseries do not grow on speculation; seedlings are grown based on orders from forests. FS nurseries can sell surplus seed and seedlings to the public, however they are offered to national forests first, then to the public as described in the private reforestation section above.

Contact: Robyn Darbyshire CF, Regional Silviculturist, USDA Forest Service, Pacific Northwest Region,  
503-808-2668. [rdarbyshire@fs.fed.us](mailto:rdarbyshire@fs.fed.us)

## Public Safety

To balance higher public safety risk from potential falling trees, debris flows and road damage with personal safety responsibility only the highest safety danger areas were closed to the public until logging and road repair is completed. **This closure area includes roads 1917, 1909, and a portion of 1376 north of Steel Bridge.** Danger Tree clearing is expected to start very soon and more log traffic and falling trees will be occurring. In addition, **a few critical deep culvert replacements or critical road work on 1901 and 1917 will make the roads impassible for a couple months, however the area where this work will be completed is already in an existing closure.** As other danger tree work is started, other sections of road will be closed for public safety during active logging operations.

**There will continue to be a mixture of log trucks, residential, and recreational traffic on road 1376 (Chetco River Road). Motorists are advised to slow down and remain alert.** A driving tip for increased safety is to get behind a log truck to take advantage of the driver's CB communications and traffic yielding from other drivers.

Although storm/water monitoring has shown little to no increase in debris flows and sedimentation from fire effects, the increased storm activity can increase the risk for these debris flows and subsequent road damage to **happen. We advise all forest visitors to be cautious and aware if traveling in the fire area.**

## Trails/Recreation

Access to the Chetco River in the **Miller, Nook and Redwood Bars and South Fork Campground** were reopened in November 2017 before steelhead season and after hazard trees were felled. Please be aware that the Redwood Bar toilets will remained closed until the fire damage is fixed and they are safe to use again. Additional portable toilets will be put in place during the high use camping season. Winter/spring camping on these bar campgrounds is never recommended as water levels rise and fall rapidly with storm events in the Chetco River area.

Working through trail partners (**Siskiyou Mountain Club**) we will maintain or reconstruct critical features along 15 trails affecting about 63 trail miles throughout the summer and fall. Additional work will be done with **Curry Citizens for Public Land Access**. Further recreation site hazard tree work will be occurring in the campgrounds, Packer's cabin, and high use trailhead areas.

## Other jurisdictions with the Chetco Bar Fire area

The **Coos Bay District Bureau of Land Management** has completed roadside hazard tree treatments, replaced some culverts, replanted trees in riparian areas, and is conducting invasive weed monitoring, and road stabilization. They are preparing to auction a Chetco Salvage Timber Sale in May. Future plans include replacing more culverts, invasive weed monitoring and treatments, additional road stabilization as needed, and reforestation.

We are also facilitating quick access to private landowners to help them with fire restoration and recovery activities on their lands.